Date: Wed, 15 Dec 93 04:30:26 PST
From: Ham-Digital Mailing List and Newsgroup <ham-digital@ucsd.edu>
Errors-To: Ham-Digital-Errors@UCSD.Edu
Reply-To: Ham-Digital@UCSD.Edu
Precedence: Bulk
Subject: Ham-Digital Digest V93 #147
To: Ham-Digital

Ham-Digital Digest  Wed, 15 Dec 93  Volume 93 : Issue 147

Today's Topics:
Alinco DR-430 9600 Bps modification.
Alinco DR-430 Extended TX modification.
Assigning NL-calls for packet radio in the Netherlands??? (2 msgs)
F6FBB Mailing List (2 msgs)
HP 100LX weirdness
Packet radio beginner question (2 msgs)
PBBS Bulletin Forwarding Mailing List
TM211 and 9600
When will we get digi

Send Replies or notes for publication to: <Ham-Digital@UCSD.Edu>
Send subscription requests to: <Ham-Digital-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Digital Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-digital".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party.  Your mileage may vary.  So there.
---

Date: 14 Dec 93 19:33:32 GMT
From: news-mail-gateway@ucsd.edu
Subject: Alinco DR-430 9600 Bps modification.
To: ham-digital@ucsd.edu

SB NET9K6 @ WW $DR430.9K6
Alinco DR-430 & 9600 Bps
This is the Alinco DR-430 9600 Bps modification. This modification will allow
the use of a G3RUH/NB96 9600 Bps packet radio/satellite modem. Please follow
the steps and do the work VERY CAREFULLY as this rig uses SMC technology! This
modification works great in my rig and I assume that it will work on almost all
430's (no warranty implied).

1) Unscrew the 3 small screws on the top cover.

2) Gently remove the top cover and unplug the speaker connector.

3) Remove the bottom cover by unscrewing the 3 small screws.

4) Remove the VFO, VOL and SQL knobs from the front panel.

5) Carefuly remove the front panel's plastic cover.

6) Unscrew the 3 small screws that hold the front panel board attached to the main board.

7) Pull out gently the front panel's board.

8) Locate pin #2 of the microphone connector and solder a small wire to it (this will be the PTT wire).

9) Remount the front panel's board and screw the 3 small screws.

10) Carefully remount the front panel's plastic cover and place the 3 knobs in their proper positions.

11) In the main board (bottom side) locate the TK10487M chip.

12) Solder the inner conductor of an RG-174 coaxial cable to pin #11 (this will be the Audio-to-modem wire).

13) Locate the CN302 connector (just under the other's side shielding).

14) Solder the inner conductor of an RG-174 coaxial cable to pin #1 (this will be the Audio-from-modem wire).

15) Solder a wire to pin #2 (ground).

15) Very carefully drill a 1/4" hole on the radio's back, just near the SP.OUT connector and pass through it all the new wires.

16) Reassemble the radio.

17) Connect the new wires to the modem and adjust it to properly handle the signal levels.

NOTES:

A) The Audio-to-modem signal level is lower than the one you can get from a Yaesu FT-736r.

B) The Audio-from-modem signal feeds the varactor diode (D303) through a 47K
   resistor (R324) so you must adjust the modem's output to provide enough
   signal level to drive the varactor properly.


PRESTO !!


73's & DX de Eduardo "Ed" Sweet - LU7AKC.

Packet radio: lu7akc @ lu7akc.#col.cf.arg.soam
              lu7akc @ KO23
Internet: postmaster@asarin.org.ar
/EX

------------------------------

Date: 14 Dec 93 19:05:49 GMT
From: news-mail-gateway@ucsd.edu
Subject: Alinco DR-430 Extended TX modification.
To: ham-digital@ucsd.edu

SB ALINCO @ WW $DR430.TX
DR-430 Extended TX mod.
This is the Alinco DR-430 Extended TX modification. This modification will
expand TX coverage to 403-499 MHz. Please follow the steps and do the work
CAREFULLY! This modification works great in my rig and I assume this
modification will work on almost all 430's (no warranty implied).

1) Unscrew the 3 small screws on the top cover.

2) Gently remove the top cover.

3) Cut the little loop wire (blue) that's located just behind the display, 2"
   left from the Power button.

4) Reassemble the radio.

5) Reset the radio's CPU by turning power ON while pressing the F key.

PRESTO !!


73's & DX de Eduardo "Ed" Sweet - LU7AKC.

Packet radio: lu7akc @ lu7akc.#col.cf.arg.soam
              lu7akc @ KO23
Internet: postmaster@asarin.org.ar

/EX

---

Date: 10 Dec 1993 15:15:02 GMT
From: pipex!uknet!EU.net!sun4nl!tuegate.tue.nl!ebv.eb.ele.tue.nl!
vandeput@uunet.uu.net
Subject: Assigning NL-calls for packet radio in the Netherlands???
To: ham-digital@ucsd.edu

---

Date: 13 Dec 1993 08:42:10 GMT
From: pipex!uknet!EU.net!sun4nl!tuegate.tue.nl!ebe.eb.ele.tue.nl!
vandeput@uunet.uu.net
Subject: Assigning NL-calls for packet radio in the Netherlands???
To: ham-digital@ucsd.edu

Fellow packeteers,

Recently I came across a number of postings on a local (packet radio) BBS that urged everybody to subscribe for an official NL-callsign. The use of such a (rather confusing) uniform way of naming packet stations is still unclear to me.

In a discussion with another packeteer (who just made up his own NL-call) I heard that the request for such callsigns were forwarded through the university of Leiden via the Internet to the USA. After 'official registration' the callsigns are then returned to the Netherlands and the requesting CB-er receives his own 'official' callsign. Curious if I could find the person responsible for the forwarding to the USA I called a friend (who happens to be a network administrator at the University of Leiden) and asked him to see if anybody there knew about it. Unfortunately he hasn't been able to find whoever it is that seems to know all about this practice...

As I still don't know the reality nor the use of the NL-calls I would like to hear from anybody who knows more about the subject. My Internet (and packet) address is given below.

73's de Timo

Name    : Timo van de Put
Internet: vandeput@eb.ele.tue.nl
packet  : TP0BRD @ MN0BBS (N.Brabant, Nederland)

---

Date: Sun, 12 Dec 93 16:17:56 MST
From: agate!howland.reston.ans.net!gatech!asuvax!ennews!stat!david@ames.arpa
Subject: F6FBB Mailing List
To: ham-digital@ucsd.edu

Welcome!
     You have joined the f6fbb-list@stat.com   The purpose of this server is to provide Sysops and Networkers with tricks/tips/help and new software updates concerning the F6FBB bulletin board system.  Exchange of UUENCODED files through the server is ok,  however,  please limit the size of each file cut to 700 lines.  Your Sysop for the server is Daniel J. Meredith,
        (n7mrp@n7mrp.az.usa.na),  (dan@aznet.stat.com).

---
To Send Mail To Be Distributed To All Subscribers:

                f6fbb-list@stat.com

And Send Normal Subject And Text.

---
To Remove Yourself From This Server, Please Send Electronic Mail To:

                listserv@stat.com

And Include The Command:

                Unsubscribe f6fbb-list

As The First Line of Your Message.

---
To Add Yourself To This List, Please Send Electronic Mail To:

                listserv@stat.com

And Include The Command:

                subscribe f6fbb-list

As The First Line of Your Message.

---
Requests For Help Should Be Sent To:

                 f6fbb-list-request@stat.com

The F6FBB Server has been established to help Sysops and Networkers alike, in providing help and information in a timely manner.  Sharing of software and other miscellaneous information via the server is quite alright.

---
Daniel J. Meredith
Arizona Packet Coordinator
Voice/Data = (602) 956-2566
Ax.25      = n7mrp@n7mrp.az.usa.na
Internet   = dan@aznet.stat.com

---
Editor, HICNet Medical Newsletter
Internet: david@stat.com                FAX: +1 (602) 451-6135
Bitnet  : ATW1H@ASUACAD

---

Date: 13 Dec 1993 15:59:23 GMT
From: juniper.almaden.ibm.com!enge.almaden.ibm.com!enge@uunet.uu.net
Subject: F6FBB Mailing List
To: ham-digital@ucsd.edu

As far as I know, F6FBB has no access to Internet. He has made no public contributions to the proposed standard that I can remember.

Roy Engehausen, AA4RE
enge@almaden.ibm.com

---

Date: Sat, 11 Dec 93 15:41:50 GMT
From: news.kpc.com!amd!netcomsv!netcom.com!netcomsv!bongo!skyld!jangus@decwrl.dec.com
Subject: HP 100LX weirdness
To: ham-digital@ucsd.edu

Heh, the new HP 100LX is a VERY nice part. It does has one minor problem. The HP Connectivity pack can initiate a remote session by sending a "magic" string of characters to the serial port. No special pre-work must be done at the laptop end of the cable (except plugging it in).

This is fine for thier client server no muss package, but it resulted in a near heart stoppage last night while monitoring packet activity.

Suddenly the display went berserk and finally the unit failed to reboot or do anything other than sit there. It also made the internal card modem

go though some weird sounding activities as well.

Oh no! I've just killed my new $1000 toy. Arrrrghhh. "Put a fork in me Moma, I'm done!"

OK, I took out the lithium battery and the two alkalines and let it sit for about an hour. Put it all back together and prest, back to life.

Now for the clue. I noticed that on receiving a netrom broadcast, the screen would echo "HP model 100LX" or something to that effect. The TNC of course had a hard time dealing with that.

Any comments on this? Anyone know what the magic phrase is to launch the HP connectivity sessions?

73 es GM from Jeff (whos heart rate has finally returned to normal.)


Amateur: WA6FWI@WA6FWI.#SOCA.CA.USA.NA | "It is difficult to imagine our
Internet: jangus@skyld.tele.com | universe run by a single omni-
US Mail: PO Box 4425 Carson, CA 90749 | potent god. I see it more as a
Phone: 1 (310) 324-6080 | badly run corporation."


---

Date: 14 Dec 93 15:56:33 GMT
From: ogicse!emory!kd4nc!ke4zv!gary@network.ucsd.edu
Subject: Packet radio beginner question
To: ham-digital@ucsd.edu

In article <CHzzKz.JIs@risc1.rug.nl> framenet@risc1.rug.nl (FrameNet BV) writes:
>From another beginner the following questions:
>
>What is needed to broadcast data at high speed over FM? How fast can you go
>and can you use "normal" modems, or i.e. a Telebit Trailblazer.

We covered this somewhat a couple of weeks ago. The limit is basically one of regulations in the US. 19.6 kb, or 20 kHz depending on code, is the limit on our 2 meter band. At 222 MHz and 440 MHz, the limit is 56 kb, or 100 kHz for unspecified codes. Above those bands, the limit is merely that the emissions be kept within the band edges. Non-US amateurs have to comply with their own government's regulations which may differ from those in the US.

Now ordinary voice grade FM is not the optimum modulation method for high speed data. Special FSK encodings, such as PSK, QPSK, MSK, etc are normally used for higher speeds than 1200-9600 baud. This in general

means dedicated radio equipment. At 1200 baud, amateurs use the Bell 202 standard through ordinary voice grade radios, and it won't interoperate with ordinary telephone modems. For higher speeds, telephone modems depend on the full duplex nature of the telephone network and on training sequences to establish their links. This doesn't generally work for amateur radio since we normally don't run nailed up full duplex links. Instead we operate on a shared channel in half duplex. So different techniques are required.

>What does the receiver need?

Aside from normal receiver type things like sufficient sensitivity and freedom from intermod, data receivers also generally need a flatter bandpass with better group delay characteristics than voice radios offer. Having an output that tracks down to DC is also useful if the modulation has a DC component as some do, such as raw NRZI.

>I know nothing about this world but I'm really interested in the possibility
>of sending data over wireless connections to different places simoultaneous.
>
>If you can't use normal modems, what are these radio modems and how fast do
>they go? Any brands?

While you can use just a simple modem, like the Baycom, and do all the protocol work in software on the computer, there is a channel and data protocol that you have to observe, and traditionally this has been implemented in a hardware and firmware device called a TNC, though there are now special high performance plugin PC cards as well. This engine is responsible for observing channel access control, you must avoid transmitting on top of other users, and for the AX25 data exchange link protocol which does the error checking and acknowledging of the ARQ protocol, handles user addressing issues, and keeps frames in sequence if they have to be resent. So a TNC has two functions, it's a protocol engine, and it generally has a built in modem for the default amateur speeds, 300 and 1200 baud. Better TNCs also have provision for an external modem of more advanced character. This is what people mean when they talk about the presence of a TAPR modem disconnect header. You can purchase modems that do 2400 baud, by default this is the Kantronics modem, and modems that do 9600 baud, either K9NG or G3RUH style modems, off the shelf from several vendors. There are also faster modems such as the GRAPES 56kb RF modem system which is the modem and the radio in one, necessary because of the special MSK modulation it uses. And there are data radios that can be used for direct FSK at 19.2 kb, IE Kantronics D4-10.

An important issue with the higher speed modems is what others in your area are using. While 1200 baud modems are universal because they are built into most TNCs, the faster modems obviously need compatable modems on the other end in order to function. No currently available modem

system will automatically negotiate a common speed between two users
with different equipment. So unless you want to talk only to yourself,
you have to go with what at least one other operator in your range is
doing.

Gary
--
Gary Coffman KE4ZV | I kill you, | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | You kill me, | uunet!rsiatl!ke4zv!gary
534 Shannon Way | We're the Manson Family | emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244 | -sorry Barney |

---

Date: Mon, 13 Dec 1993 06:23:17 GMT
From: boulder!cnsnews!spot.Colorado.EDU!koberg@uunet.uu.net
Subject: Packet radio beginner question
To: ham-digital@ucsd.edu

Hi. I'm trying to get into packet radio, but know not too much about it.

I'm trying to go the cheap route, so I got the schematics for the Baycom
modem using the TCM3105, and Baycom 1.5 software.

My question is, what frequencies are normally used for packet radio at
1200 baud (that is what the Baycom modem is at right)?

My radio is 2 meter, but I understand some transmissions are in the
FM range. Is 2 meter for 9600 and FM for 1200/300? Lemme know, so
I'll know whether to build this or not.

Plus, are there any more schematics out there for a better modem than
this? Perhaps some with DCD? Any usual schematics format (preferably
schema) or even a PS file would be nice.

The faq failed to mention any relevant info on any of these topics...or
any anon. ftp sites for that matter.

What other software can I use the Baycom modem with?

Email or post replies

koberg@spot.colorado.edu

---

Date: Sun, 12 Dec 93 16:18:44 MST
From: agate!howland.reston.ans.net!gatech!asuvax!ennews!stat!david@ames.arpa

Subject: PBBS Bulletin Forwarding Mailing List
To: ham-digital@ucsd.edu

Welcome!
     You have joined the bull-fwd@stat.com   The purpose of this server is to provide Sysops and Networkers a server in which to forward bulletins and also discuss forwarding problems and obtain forwarding partners. This server is also for the exchange of general information relevant to all Amateur Related PBBS software packages available today...

Please use UUENCODING and PKZIP your bulletins when using the server.
Please limit the UUENCODE to 700 Lines...

Your Sysop for the server is Daniel J. Meredith,
        (n7mrp@n7mrp.az.usa.na),  (dan@aznet.stat.com).

---
To Send Mail To Be Distributed To All Subscribers:

                bull-fwd@stat.com

And Send Normal Subject And Text.

---
To Remove Yourself From This Server, Please Send Electronic Mail To:

                listserv@stat.com

And Include The Command:

                Unsubscribe bull-fwd

As The First Line of Your Message.

---
To Add Yourself To This List, Please Send Electronic Mail To:

                listserv@stat.com

And Include The Command:

                subscribe bull-fwd

As The First Line of Your Message.

---
Requests For Help Should Be Sent To:

bull-fwd-request@stat.com

---
Daniel J. Meredith
Arizona Packet Coordinator
Voice/Data = (602) 956-2566
Ax.25      = n7mrp@n7mrp.az.usa.na
Internet   = dan@aznet.stat.com

---
Editor, HICNet Medical Newsletter
Internet: david@stat.com                FAX: +1 (602) 451-6135
Bitnet  : ATW1H@ASUACAD

------------------------------

Date: 14 Dec 93 02:16:01 GMT
From: ogicse!uwm.edu!math.ohio-state.edu!cs.utexas.edu!geraldo.cc.utexas.edu!
donald.cc.utexas.edu!not-for-mail@network.ucsd.edu
Subject: TM211 and 9600
To: ham-digital@ucsd.edu

Sorry if this is a FAQ:

how to use Kenwood TM-211A with G3RUH 9600bps modem ?
I need to know where to inject and retrieve the signal.

Thanks

73 de Paulus N5SNN

--
Paulus Suryono Adisoemarta     Internet: yono@ccwf.cc.utexas.edu
Petroleum Engineering Dept.               paulus@nextdown.pe.utexas.edu (NeXT!)
U of Texas, Austin                        yono@gnu.ai.mit.edu
Phone: (512) 471-9628                PBBS: N5SNN @ N5LJF.#AUS.TX.USA.NA
Radio: n5snn or yg1qn                AMPRnet: n5snn@ausgw.ampr.org

------------------------------

Date: Fri, 10 Dec 93 08:47:00 -0600
From: ukma!eng.ufl.edu!usenet.ufl.edu!gatech!howland.reston.ans.net!cs.utexas.edu!
swrinde!menudo.uh.edu!nuchat!cld9!mario.campos@seismo.css.gov
Subject: When will we get digi
To: ham-digital@ucsd.edu

Quoting JLWEI@ARTSCI.WUSTL.EDU to ALL:

JL>: amateur radio licence.  So, in the interest of some added security
JL>: while she and my 4-year-old son are in the car, I am considering the
JL>: purchase of a cellular phone.

   How about a 44 magnum?


 ---------------------------------------------------------------------------
 =: Mario A. Campos - N6ALS |  mario.campos@nitelog.com     | DXCC #24824  :=
 =: Monterey, CA 93940 USA  |  N6ALS@K6LY.#NOCAL.CA.USA.NA  | WAS  #33960  :=
 ---------------------------------------------------------------------------


Message written at 8:36am, on Friday, December 10, 1993.
---
 * [R2.00o] * Usenet * Nitelog BBS * Monterey CA * 408-655-1096

------------------------------

End of Ham-Digital Digest V93 #147
******************************
******************************